

REMARKS

Applicants have amended Claim 22 herein. The claims have been amended to incorporate more specific language therein to distinguish the elements of the Claims from the disclosures of the cited references. Claim 22 contains language in the body of the claim which formerly was contained in the preamble of the claim. Pursuant to the Examiner's comments this should result in patentable subject matter.

The Examiner is respectfully requested to reconsider his rejection of Claims 18 - 22 under 35 U.S.C. §103(a) as being unpatentable over Aoyama, et al. (U.S. Patent 5,592,024) in view of Zhao (U.S. Patent 6,245,663).

Aoyama discloses a semiconductor device containing a semiconductor substrate in which a semiconductor element is formed, an interlayer insulating film formed on the semiconductor substrate, an insulating barrier layer, formed on the interlayer insulating film by plasma nitriding, for preventing diffusion of a metal constituting a wiring layer, a conductive barrier layer, formed on the insulating barrier layer, for preventing diffusion of the metal, and a wiring layer formed of the metal on the conductive barrier layer. A bottom portion of the wiring layer is protected by the conductive barrier layer and the insulating barrier layer. Aoyama contends that the diffusion of the metal constituting the wiring layer can be surely prevented.

The Examiner has conceded that the Aoyama, et al. reference does not disclose the claimed coating liner feature of the invention.

Zhao provides a technique for fabricating IC interconnects using a single-damascene process which incorporates an etch-stop layer deposited after processing of the previous metal plug layer. This process is designed to eliminate the effects of CMP-induced erosion of the etch-stop layer and therefore allows an extremely thin etch stop to be used.

In reviewing the Aoyama reference, it appears that the Examiner is traking individual elements out of context to render the claims obvious. There is no disclosure of the prevention of high electric field concentration in a surface of a dielectric body 509 at a facetted shaped intersection with sub 250 nanometer range size and spacing conductive interconnect members. The reference simply does not disclose what Applicant claims.

The difference in the two inventions cited as prior art serve to rebut the rejection of the claims under 35 U.S.C. 103, Applicants submit that the prior art does not allow or support the conclusion of obviousness that the Examiner seeks to establish.

The references to Aoyama, et al. and Zhao contain broad disclosures. It appears from a review of the references that if an element or step in the system is included in either of them, the Examiner is asserting that these elements, without more, are suitable to render obvious the present invention.

Applicants respectfully submit that the specificities of the disclosures do not rise to the level required to qualify as an appropriate reference with respect to Applicant's invention.

Further, the reference must describe the applicant's claimed invention sufficiently to have placed a person of ordinary skill in the field of the invention in possession of it. (Citations omitted) In re Lonnie T. Spada et al., 911 F.2d 705, 708 (Fed. Cir. 1990)

Aoyama, et al. and Zhao, et al., alone, or in combination, do not disclose or even imply the device and method of the present invention. In the rejection, the Examiner is selectively picking and choosing individual elements disclosed in the references to the exclusion of what the references as a whole teach to one skilled in the art. For example, to arrive at Applicants' invention, the person skilled in the art would have to randomly pick and choose among a number of different elements found in Zhao with the only guidance as to what element(s) to select being provided by Applicants disclosure since Aoyama, et al. does not teach the same materials. Based upon the skilled artisan's reading and knowledge of the two systems disclosed and their respective objectives and how they are implemented, it is unlikely that the person skilled in the art would use Aoyama, et al. in combination with Zhao.

The Examiner in his application of the cited references is improperly picking and choosing. The rejection is a piecemeal construction of the invention. Such piecemeal reconstruction of the prior art patents in light of the instant disclosure is contrary to the requirements of 35 U.S.C. § 103.

The ever present question in cases within the ambit of 35 U.S.C. § 103 is whether the subject matter as a whole would have been obvious to one of ordinary skill in the art following the teachings of the prior art at the time the invention was made. It is impermissible within the framework of Section 103 to pick and choose from any one reference only so much of it as will support a given position, to the exclusion of other parts necessary to the full appreciation of what such reference fairly suggests to one of ordinary skill in the art. (Emphasis in original) In re Wesslau 147 U.S.P.Q. 391, 393 (CCPA 1965)

This holding succinctly summarizes the Examiner's application of references in this case, because the Examiner did in fact pick and choose so much of the Zhao reference with Aoyama, et al. to support the rejections and did not cover completely in the Office Action the full scope of what these varied disclosure references fairly suggest to one skilled in the art.

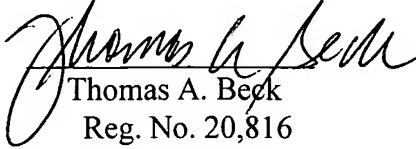
In the present case, the skilled artisan, viewing the references would not be directed toward Applicants device and method. There can reasonably be no system emanating from the Aoyama et al. and Zhao, et al. references as the basic systems of the two references are different. There is no proper basis to combine them.

Applicants have attempted in this response to amend the claims to place them in a form which should result in their allowability. If the Examiner wishes to discuss via telephone the substance of any of the proposed claims contained herein with the intent of putting them into an allowable form, Applicants' attorney will be glad to speak with him at a mutually agreeable time and will cooperate in any way possible.

In view of the arguments and modifications to the claims, allowance of this case is warranted. Such favorable action is respectfully solicited.

Applicants requests a one month extension of time within which to respond to the outstanding Official Action. A check in the amount of \$120.00 is enclosed to cover the extension fee.

Respectfully submitted,



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I certify that this amendment was deposited with the United States Postal Service on the date shown below addressed to: *Assistant Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450*

Signature 
Name: Thomas A. Beck

Date: February 13, 2006